# AACI Primary Use Cases for Artificial Intelligence (AI) in Oncology Operations

## In Clinical Research

### 1. Trial Start-Up

a. Feasibility and portfolio assessment
    i. Recommending new trials to open
        1. Protocol development for investigator-initiated studies
        2. Informed consent form (ICF) language development and translation for investigator-initiated studies
    ii. Clinical trial search and discovery tools
    iii. Cohort assessment
        1. Eligibility criteria filtering against electronic health record (HER) data
        2. Portfolio feasibility assessment based on historical accrual and population data
b. Operations
    i. Readiness evaluation for new studies
    ii. Streamlined feasibility modeling
c. Start-up timeline tracking
d. Clinical Trial Management System (CTMS) calendar build
e. Coverage analysis development
f. Protocol development
g. Finance and contracting
    i. Clinical trial budget creation and quality review
    ii. Contract review and validation support
    iii. Reliance agreement coordination across sites

### 2. Consent, Enrollment and Participant Management Workflows

a. Prescreening
b. Patient schedule assessment
    i. Recommending currently open trials to specific patients
    ii. Patient education on trial options
c. Consent
    i. Local and remote eConsent workflows
d. Eligibility:
    i. Patient history deep dive and trial matching
    ii. Biomarker driven trial matching
    iii. Principle Investigator (PI) sign-off on eligibility and consent
e. Participant management
    i. Patient logistics communication platforms
    ii. Patient scheduling optimization aligned to protocol requirements
    iii. Adverse event (AE)/Serious adverse event (SAE) management
        1. AE and SAE capture and monitoring
        2. Automated AE and SAE reminders and follow-up tracking
        3. Nurse-entered AE data with downstream review

4. PI sign-off workflows for safety data

iv. CTMS visit management
1. Calendar certification automation
2. Visit certification quality assurance (QA) and discrepancy detection
3. Notification of certification holds and releases
4. Visit-level revenue readiness validation

v. Investigative pharmacy (IP) management
1. Drug shipment coordination to site or patient
2. Temperature monitoring and chain-of-custody tracking
3. Drug preparation and release workflows

vi. Imaging, pathology, and response assessment
1. Tumor measurement and response assessment (RECIST, iRECIST, Lugano)
2. Tumor worksheet and response documentation automation
3. Radiology reading conversion into structured trial documentation

## 3. Data management

a. Data Entry
i. Reduction of manual electronic data capture (EDC) entry
ii. Structured data transfer from EHR to sponsor EDC
iii. Unstructured data transcription and normalization
iv. Extraction of performance status, staging, biomarkers, etc.

b. Study monitoring and dashboards
i. Remote data verification and monitoring
ii. Screening and prescreening dashboards
iii. Amendment and reconsent tracking
iv. SAE and deviation completion tracking

## 4. Regulatory management

a. Delegation of authority (DOA) and credentialing management
b. Sub-investigator onboarding and off-boarding
c. Remote monitoring support
d. Sponsor coordination and regulatory communications
e. Compliance tracking and audit readiness
f. Centralized institutional review board (IRB) closeout coordination
g. Coordinating site–led closeout workflows

## 5. Finance and contract management

a. General ledger and study account
i. Trial income and revenue vs. expense dashboards

b. Patient account billing compliance
c. Monitoring budget and contract terms

i. Number of allowable enrollments
ii. Number of allowable screenings and screen failures
iii. Data turn-around times
iv. Staff effort forecasting
v. Extended records retention requirements

d. Final invoicing and financial reconciliation
i. Holdbacks

## In Non-Research

### 6. Tumor registry data extraction

a. "Human-in-the-loop" initial abstraction
b. Identifying cases prospectively

### 7. Analysis of administrative data

a. Evaluation assessment of grants
b. Identification of publications funded by the cancer center